focus

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Canada

Only one nation in the world, the Soviet Union, exceeds Canada in size. Only two or three possess untapped resources as bountiful as those of Canada. These two factors, plus a location facing three of the important oceans of the world and next door to the United States, plus membership in the British Commonwealth of Nations, have brought Canada to world prominence at mid-twentieth century.

Vastness, of course, has imposed burdens, particularly in the fields of transportation and communications. It has meant an extensive rather than an intensive use of the land. Although the population is now nearing the 18 million mark, the overall density is only a little more than four persons per square mile, compared, for instance, with 194 in France and 619 in Japan. But size and emptiness, combined with immense quantities of lumber, fuel, and metallic minerals are now beginning to pay off.

Canada's location on the great circle air routes across the Arctic between the major centers of North America, Europe, and the Soviet Union, has rendered it of ever increasing strategic importance internationally, as witness the series of early warning radar lines across its northern reaches—the Dew Line and the Mid-Canada Line. Its location fronting on both the Atlantic and Pacific Oceans, and its common land border with a rich neighbor have multiplied opportunities for trade. Since the early 1930's, the United States has been Canada's greatest trading partner, buying 60 per cent of its exports and selling to it 75 per cent of its imports. And through membership in the British Commonwealth, Canada has retained in Britain a large and reliable market for a variety of exports, and has benefited from preferential trade agreements throughout the Commonwealth.

THE LANDSCAPE. In terms of physiography, climate, vegetation, and soils, Canada is generally divided into several rather symmetrically arranged regions. In the heart of the country and occupying more than half of its expanse is the Canadian Shield. In the far north the Shield gives way to the scattered islands of the Arctic; to the west and east it is flanked by lowlands — to the west the Prairies and the Mackenzie Basin, to the east the Great Lakes - St. Lawrence lowland. Beyond these are the mountainous ocean borderlands of the Western Cordillera and, in the east, the Appalachians.

The Shield, part forest and part tundra, is an intensely glaciated plateau, formed of ancient and resistant rocks. The dense forests of spruce, tamarack, and birch, immensely rich metalliferous veins in its Pre-Cambrian rocks, and innumerable lakes

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acting as a huge reservoir for dozens of large rivers, have encouraged industrial development though as yet chiefly at the exploitative level. Infertile and acid soils, permanently frozen subsoil, severe winters, and a short growing season have militated against agricultural settlement.

The Prairies, extending westward to the Rocky Mountains in three step-like formations, represent a northern prolongation of the interior lowlands and the Great Plains of the United States. As reflected in the original bunch grass, prairie, parkland, and mixed forest cover, the climate changes from south to north from semiarid, with less than 15 inches of rain a year, to subhumid, with about 20 inches; from a frost-free season of over 110 days to less than 80; and from warm summers to cool—but everywhere the winters are extremely cold. The Prairies soils are naturally fertile, and this is one of the greatest grain-growing areas in the world, as well as being tremendously rich in oil and natural gas which are being intensively exploited.

To the north, the interior lowlands are characterized by the deeply entrenched MacKenzie drainage system, enormous lakes such as Athabasca, Great Slave, and Great Bear, a fairly continuous forest cover, permafrost, and brief cool summers and very cold winters which practically preclude agriculture.

In the Great Lakes — St. Lawrence lowlands, which are rolling to flat varied by scarplands and residual peaks, the climate is of the humid continental relatively warm summer type, with a growing season of from 150 to 200 days, heavy snowfalls, and spring and early summer maximums of rain. Fertile gray brown podzolic soils have developed under a mixed deciduous-coniferous forest of maple, elm, beech, birch, pine, and hemlock. In this small section of the country live two-thirds of Canada's population.

The Western Cordillera consists of high fold mountains, a downfaulted depression, a central region of massive mountains, deeply dissected uplands and long narrow basins, and a coastal complex of high and rugged mountains, fiords, and islands. Such a varied terrain naturally gives rise to a mosaic of climate, vegetation, soil, and scenery. Flat land is scarce, and forestry, grazing, fishing, and mining are the main activities.

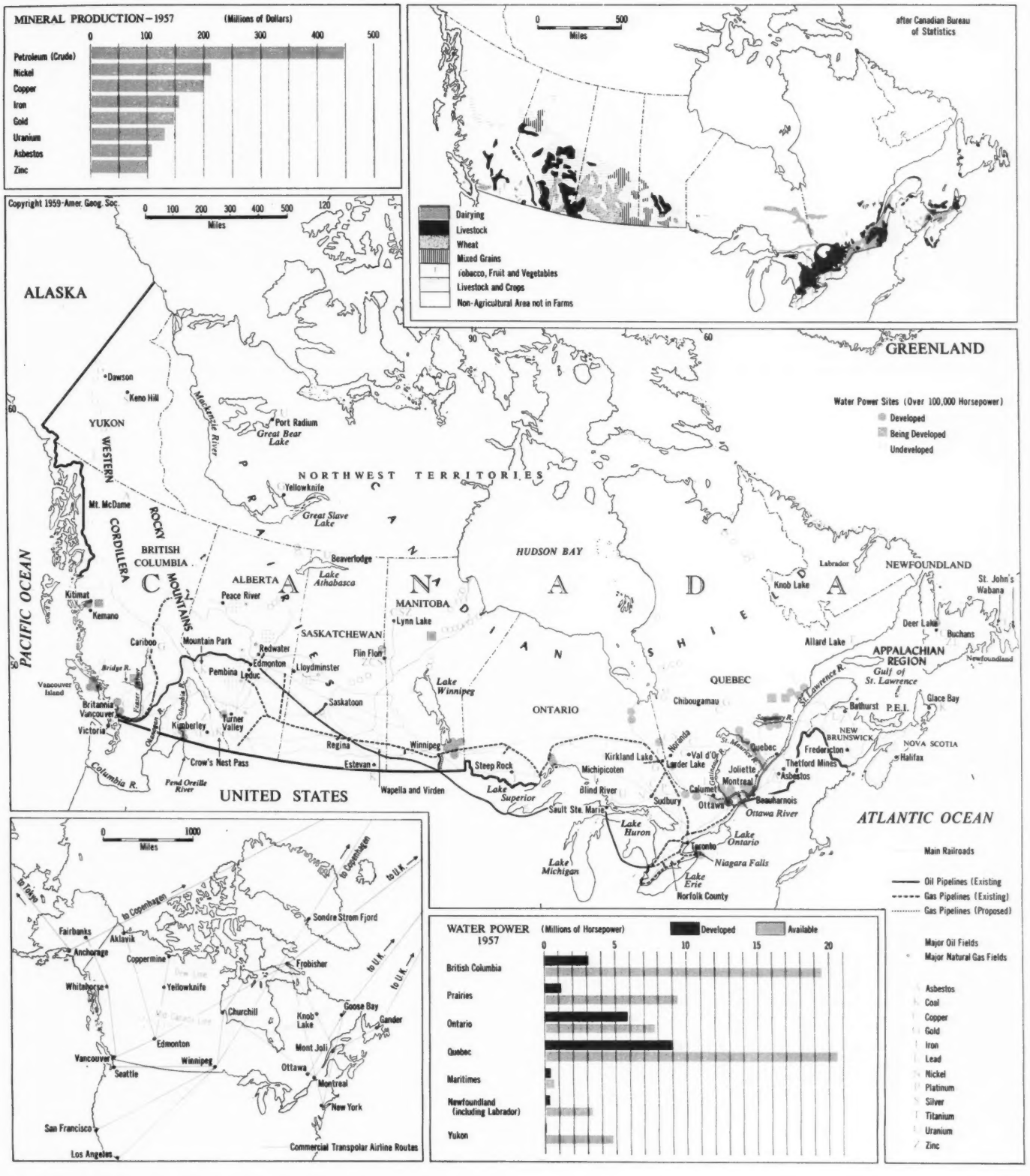
The Appalachian region comprises a succession of mountain ridges, uplands, and wide valleys, which confront the Atlantic and the Gulf of St. Lawrence with an intricate coastline of deep embayments, prominent headlands, and rocky shores. Here the marine influence is strong, the forests are coniferous or mixed stands, and the soils are predominantly podzolic, acid and infertile, except in areas of alluvium and glacial lake clays. Again, forestry, grazing, fishing, and mining are more typical than agriculture.

COMMERCE AND INDUSTRY. Canada is traditionally pictured as an agricultural country, but, actually, the activities that have given drive to the economy have been commercial and, more recently, industrial rather than agricultural. In turn, the codfish trade, the fur trade, the timber trade, the wheat trade, the pulp and paper and mineral trades have been the mainstay of the economy.

For the better part of a hundred years American industry has insisted upon taking Canadian products in raw or semi-processed form, and this is nowhere more obvious than in the forestry and mining industries (the large-scale manufacture of newsprint is the only exception). Not only does the United States provide by far the major market for the products of these industries, but United States capital has developed and today controls more than 50 per cent of their productive capacity.

The forest industries currently employ five per cent of the labor force and contribute six per cent of the value of the country's total revenue. Lumber, chiefly from British Columbia, and newsprint, chiefly from the east, especially Quebec, are the most important products, and 90 per cent of the newsprint (80 per cent to the United States) and 50 per cent of the lumber are exported. Canada's forests extend over an area of 1.5 million square miles and two-thirds of them are commercial stands of timber. It is estimated that on a sustained yield basis production could be doubled on land now classed as accessible.

A fourfold increase in the last twenty years in the value of mineral production, which now is about C$2,133 million, expresses only partly the most spectacular advance in the economy. In 1957 raw or semi-processed minerals represented 30 per cent of all exports. Canada has long been the world's largest producer and exporter of nickel and asbestos, a place it is likely to hold well into the future. Petroleum output, the annual value of which is twice



Maps drawn by Vincent Kotschar

as great as that of any other mineral, is expanding rapidly, and will continue to do so; only a fraction of the Prairies potential has been tapped so far. Long-established centers and new discoveries, especially on the Shield and in British Columbia, have kept nickel, copper, zinc, lead, gold, iron ore, and uranium among the top-ranking minerals; the last two, in fact, are certain to outpace all but petroleum within a few years. Uranium production, for instance, tripled during 1957 with the inauguration of operations in big new mills in the Blind River area of Ontario and increased operations elsewhere.

Canada is today one of the world's leading manufacturers — probably the sixth largest. About 30 per cent of the national income is derived from manufacturing, mostly from pulp and paper, nonferrous metal smelting and refining, petroleum products, food processing, and sawmilling, using domestic raw materials; and from machinery, motor vehicles, aircraft, rubber, textiles and clothing, and electrical apparatus, using chiefly imported raw or semi-manufactured materials.

All but six per cent of the manufactures are for home consumption. Ontario is the most industrialized province, producing annually about half of the manufactured goods, and all of the major industries are represented here, notably automobiles, agricultural implements, tobacco processing, and iron and steel. Quebec predominates in the pulp and paper, aluminum, textile and clothing, and railroad rolling stock industries. Manufacturing has spread rapidly in the post-war period in the Prairie provinces and British Columbia, but Montreal is still the prime industrial center, and Toronto runs a close second.

Canada has only just begun to exploit its energy potential — water power on the southern fringe of the Shield, in the St. Lawrence, and in the Western Cordillera, and the vast oil-bearing fields in the interior lowlands. Coal, 60 per cent of which is imported, largely from the United States, still provides almost half of the energy used by industry; electricity provides 24 per cent of it, and petroleum products 22 per cent.

The installed hydroelectric capacity of 20 million horsepower in 1958 is the second largest in the world, after the United States, but this is no more than one-quarter of the recorded potential. Quebec, which has nearly half of the installed capacity, relies on the power of the St. Lawrence and its north bank tributaries, especially the Ottawa, Saguenay, and St. Maurice. Ontario uses power chiefly from the St. Lawrence — Great Lakes system. The tremendous potential of British Columbia has been as yet scarcely touched, and that of Labrador likewise.

Canada imports more than half of its petroleum requirements. It is currently more economical in general to import crude Venezuelan or Middle Eastern oil for the eastern industries and export the western surplus to western and north-central United States. However, a growing pipeline system, particularly the recently completed transcontinental natural gas line, should before long bring large quantities of oil and natural gas to the east.

Nothing has done more to enable the country to consolidate its east-west link and withstand the economic pulls to the south than the 45,000 miles of railroad that span the continent and the new 5,000-mile Trans-Canada Highway now being built and scheduled for completion in 1961. But the most spectacular development in the transportation field in recent years, of course, has been the St. Lawrence Seaway, which by April, 1959, will provide cheap and quick transport from the Atlantic to Lake Superior through the elimination of the shipping bottleneck above Montreal and the dredging of all channels to a depth of 27 feet. It is estimated that four-fifths of the Seaway traffic will be bulk raw materials, such as iron ore from the Labrador-Quebec area to the Great Lakes steel centers. Aviation, too, is greatly aiding in the development of the economy as a whole and the penetration of the Arctic region and exploration of its mineral resources.

FARMING AND FISHING. Altogether agriculture contributes about 13 per cent of the national income and employs 15 per cent of the labor force. In the last twenty years the volume of farm production has increased by more than 50 per cent, though the area of improved land increased by only 11 million acres, from 86 million to 97 million. This has been achieved mainly by a very great rise in the productivity per acre as a result of a mechanical revolution, abandonment of land of poor quality, development of disease-resistant grain crops, and expansion of irrigation and of the acreage devoted to high-value specialty crops such as sugar beets and tobacco.

Wheat still reigns supreme among Canadian grains. In fact, on August 1, 1957, the beginning of the crop year, the carryover of wheat reached the unprecedented total of 723 million bushels, largely because of six years of bumper harvests. Elevators were also jammed to capacity with an additional 385 million bushels of oats, barley, rye, and flaxseed. This surplus problem, a serious one for Canada, is aggravated by a surplus in the United States, and that country's surplus program. But the specialized wheat economy of the Prairies is slowly being replaced by a more diversified cultivation, and the raising of livestock. Dairy production has expanded as rapidly here as elsewhere in the country, and, in addition, the Prairies today have become the country's main source of beef cattle.

Agriculture in the Western Cordillera is characterized by a pronounced regional specialization — stone fruit and apples in the Okanogan Valley, dairying and truck farming in the lower Fraser Valley, for example — a reflection of the broken terrain and varied climates.

In the east, livestock have become by far the largest source of income to the farmers. A federal freight assistance program has aided this trend by increasing consumption of feed grain shipped from the west, for livestock depends more on fodder crops here than on pasture. The other striking development in the east is an increasing diversification resulting from the exploitation of special soil and climatic conditions, such as tobacco in Norfolk County (Ontario) and Joliette (Quebec); potatoes on Prince Edward Island; fruit, especially apples and peaches, in the Niagara and St. Lawrence lowlands; and truck farming in southern Ontario and around Montreal.

Fishing continues to play a significant role in the Canadian economy. The landing of some 2 billion pounds of fish each year provides the livelihood of of about 80,000 people and large quantities of fish for export. The modernized Atlantic fisheries, specializing in lobster, cod, haddock, and halibut, contribute more than half of the total catch by value. The Pacific fisheries concentrate on salmon, halibut, and herring. Protection afforded to the salmon industry by United States — Canadian cooperation is paying great dividends.

THE PEOPLE. As in the United States, the population is predominantly urban and extremely diverse

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